International Bridges Crossborder Survey

El Paso-Ciudad Juárez

Social and Expenditure Profile

City of El Paso

International Bridges Department

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EL PASO
INTERNATIONAL BRIDGES

El Colegio de la Frontera Norte

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EXECUTIVE SUMMARY

This study is a collaborative effort between the International Bridges Department and El Colegio de la Frontera Norte to quantify social and economic crossborder activities from vehicle and pedestrian crossings through the El Paso-Ciudad Juárez port of entry. Surveys were conducted all days of the week in morning (7 a.m. to 3 p.m.) and afternoon (3 p.m. to 11 p.m.) shifts from October 1, 2019 to March 17, 2020 on the Mexican side at three of the region's principal bridges – Paso del Norte-Santa Fe, Bridge of the Americas-Cordova and Ysleta-Zaragoza. Residents that indicated that their primary place of residence was México were given an "entry" survey while those that said it was the United States were given an "exit" survey. The distinction is that the former captures planned activities and expenditures while the latter captures activities and expenditures already made. Using a stratified random sampling methodology and sampling weights, a sample size of 8,623 survey responses is achieved which is representative of a population size of 7.6 million personal crossings.

KEY SURVEY FINDINGS

Demographics

- México is the primary place of residence for three-fifths (60.3%) of the personal crossings and U.S. residents comprise the remaining two-fifths (39.7%).
- Border crossings are almost entirely local with 59% originating from Juárez Municipio and 37% from El Paso County.
- Residents from other top U.S. counties that use the bridge system include: Doña Ana (NM), Ector (TX), Denver (CO), Hidalgo (TX), Maricopa (AZ), Los Angeles (CA), Dallas (TX), Adams (CO), Harris (TX), Pinal (AZ), Orange (CA), Bernalillo (NM), Eddy (NM), and San Diego (CA).
- Residents from other top Mexican states that use the bridge system include: Chihuahua, Durango, México City, Coahuila, Jalisco, Quintana Roo, México, and Querétaro.
- A larger share of México residents walk while a larger share of U.S. residents drive across.
- Roughly one-third of vehicle crossings are done in groups of two or more persons.
- Three-fifths of the total crossings are done by men, tied to work related vehicle travel.
- México residents of both genders are more likely to be between the ages of 20 and 39.
- U.S. male residents are more likely to be 50 years and older; the age distribution among U.S. female residents is relatively flat.
- U.S. residents that use SENTRI through Ysleta are older than their Mexican counterparts.

- U.S. pedestrians that cross through PdN tend to be older, relative to BOTA and Ysleta.

Reasons for Crossing

- The top reasons for crossborder travel for México residents are shopping (40.7%) followed by social (25.4%), work (20%) and school (5.5%) related activities.
- Southbound U.S. visitors largely cross for social (55.7%) reasons, shopping (14.9%), work related activities (9%), health visits (8.1%), and to eat or drink (4.7%).
- Vehicle passengers and pedestrians exhibit similar reasons for crossing (as the above two bullets); however, the primary motive for Ysleta SENTRI users is linked to school and work activities, the latter especially evident for U.S. residents.
- Women are more likely to cross to shop or for social (family) and health visits.
- Men, especially from México, are more likely to cross for work related reasons.
- Among México residents, social visits are directly correlated with age (the older the age group, the greater the share of social visits) and attending school is indirectly correlated with age; persons 30 years and older are more likely to cross for shopping.
- Among U.S. residents, social visits are negatively correlated with age and health visits are positively correlated with age.

Spending by Economic Activity

- A larger share of southbound visitors from the United States (72.3%) are more likely to spend (any amount) than northbound visitors from México (65.4%).
- Of the three bridges surveyed, Ysleta crossers are less likely to spend (any amount), in particular if they are SENTRI users.
- Men in general are slightly more likely to make a purchase of any amount.
- Roughly the same percent of all age groups, except the youngest 15 to 19 years old, say that they are likely to make a purchase of any amount.
- There is a very high level of retail activity among México residents who cross into El Paso to shop – almost four out of five shopping visits (78%) are tied to a retail establishment while the remaining one out of five visits are related to a service purchase; the top types of retail stores include:
  1) *clothing & accessories* (26.3% of total visits / $150 average spending);
  2) *food & beverage* (17.6% / $72);
  3) *general merchandise* (14.4% / $158); and
  4) *gasoline stations* (9.6% / $36).
- U.S. residents who shop in Cd. Juárez split their spending visits roughly half and half between retail (53%) and services (47%); the top retail store types they spend at include:

1) *food & beverage* (31.6% of total visits / $86 average spending);
2) *health & personal care* (8.5% / $177);
3) *general merchandise* (4.5% / $277)

- On the services side, *restaurants* are the top category for both México (16.8% of total visits / $49 average spending) and U.S. (25.8% / $94) residents. This represents the second largest category of spending by U.S. resident crossers into Cd. Juárez and, on average, spend almost twice as much as their Mexican counterparts who visit El Paso eateries. Other key service purchases for U.S. residents include:
  - *offices of physicians, health practitioners & related medical services* (9.5% / $229);
  - *offices of dentists* (2.6% / $184); and
  - *repair & maintenance services* (2.1% / $125); mainly for auto, but also includes electronics, equipment, and personal or household goods.
- Over the survey 24-week period, 87% of the total crossborder dollar expenditures by México residents to El Paso are in retail, versus 48% by U.S. residents who spend in Cd. Juárez retail stores.
- Residents from México spend almost twice as much than their U.S. counterparts in the retail trade sector ($226.7 vs. $118.8 million over the 24-week period). Conversely, U.S. residents purchase over four times as much on services than their Mexican counterparts, primarily at restaurants ($43.1 million) and in health related services ($38.6 million).
- Men make the majority of dollar purchases and spend more on average with few exceptions.
- Among México residents, the middle-aged group (30-49 years) is the largest consumer of U.S. retail and visitor of restaurants.
- Among U.S. residents, the oldest age group (50+ years) is the largest consumer of Mexican goods and services.

Trip Characteristics

- The vast majority of persons (65.8%) that cross – in both northbound and southbound directions of visits – stay on the other side of the border between two and nine hours.
- 2-3% make quick trips under 60 minutes, mainly to pick up or drop off something or someone.
- 21% of Mexican and 29% of U.S. crossborder visitors stay for at least 24 hours.
- Most overnight stays are with family while 6% in both directions use hotel accommodations.

- For regular vehicle (standard and ready) crossings, 29% and 20% of México and U.S. residents indicated they had not driven to El Paso in the previous month, respectively, while 34% and 32% drove across the border five more times.
- Most persons driving through the expedited SENTRI vehicle lane at Ysleta are high frequency crossers with 74% of México and 67% of U.S. residents making five or more trips in the last 30 days.
- For pedestrians, a large share cross very few times if at all – 49% of México and 57% of U.S. residents had not walked across in the past month.
- Half of all vehicle, Ysleta SENTRI and pedestrian crossers think wait times into El Paso should not exceed 40, 15 and 15 minutes, respectively.
- Ninety percent of vehicle, Ysleta SENTRI and pedestrian crossers believe wait times should not exceed 60, 30 and 45 minutes, respectively.

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INTRODUCTION

El Paso and Ciudad (Cd.) Juárez share a strong crossborder relationship as witnessed by daily crossings that contribute to the social and economic ties that bind the region's 2.3 million residents (Census 2020; CONAPO 2020). Indeed, El Paso serves as the second busiest port of entry for vehicle and pedestrian traffic along the U.S.-México border (DOT 2020). In 2019, over 10.6 million northbound vehicles and almost 7.9 million pedestrians (Table 1) crossed through the region's four principal bridges – Paso del Norte (PdN), Stanton, Bridge of the Americas (BOTA), and Ysleta (in Spanish the respective bridges are better known as Santa Fe, Lerdo, Cordova, and Zaragoza). The PdN bridge connects both downtowns and historically has been the focal crossing point for persons on foot, while Ysleta has recently witnessed a substantial increase in vehicle traffic as the population and commerce expand eastward.

Table 1. El Paso POE annual northbound crossings (in millions)

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Vehicles	9.968	9.148	9.463	10.645	11.595	12.258	12.628	13.051	13.074	10.666
Pedestrians	6.931	6.172	6.091	6.069	6.572	6.848	7.033	6.928	7.222	7.856

Source: U.S. Customs and Border Protection, El Paso Branch

Over the years, greater security scrutiny, longer queues and higher wait times have become a source of frustration for crossborder travelers and lost sales for merchants and service providers, especially among retailers who count on purchases from Mexican visitors. To-date, however, little systematic analysis has been conducted on crossborder activities from personal travel or on the effects of bridge delays. Through a collaborative effort between the City of El Paso International Bridges Department (IBD) and El Colegio de la Frontera Norte (COLEF), this research utilizes face-to-face surveys and input-output analysis to address this black box of information with two overlapping objectives in mind: 1) to provide policymakers with regular social and expenditure profiles of crossborder travelers; and, in a subsequent report 2) to estimate the monetary impact of purchases by residents from Mexico across the El Paso economy.

This technical report is the first of three that analyzes the responses from a short survey covering the period October 1, 2019 to March 17, 2020. The study was paused due to COVID-19 which threatened the health of the respondents and interviewers. The subsequent two reports will cover the results to a longer survey that started on January 1, 2020 and the economic impact analysis, respectively.

LITERATURE REVIEW

The literature on U.S.-México crossborder impacts from personal travel and expenditures is scant, namely because such studies require costly surveys that are time and labor consuming. The research that does exist is often a myriad of anecdotal information or qualitative evidence based on a method of convenience or purposive sampling that only captures snapshots in time (Ghaddar et al. 2004; Guo et al. 2006; Hadjimarcou 2008; Mendoza 2012; Baruca and Zolfaharian 2013). These studies also tend to focus on only one side of the border and gross measures rather than on net transfers between border city

pairs (SANDAG 2006; Coronado and Phillips 2007).[1] Reasons for travel are generally similar across the research but differ in rank order, depending on the region and direction of travel, with the top purposes being shopping, work/business, friends/family, recreation/vacation, school, and health. As a result of data limitations, more rigorous statistical or mixed-methods approaches have escaped the analysis. Some exceptions include studies that pursue a stratified survey design to generalize their findings and economic impact estimates (SANDAG 2006; del Castillo et al. 2007; Pavlakovich-Kochi and Charney 2008).[2] Their approach, however, is also limited to snapshots in time.[3]

PARTNERSHIP

To overcome the time and cost constraints faced by previous research efforts, IBD signed an international cooperation agreement with COLEF Cd. Juárez and Tijuana campuses to conduct the International Bridges Crossborder Survey (IBCS) over the course of one year (with the option to exercise a second year, approved and signed on August 20, 2019). COLEF is a Northern México university system of graduate (Masters and PhD) programs in the social sciences that focuses on border issues. Its higher education institutions have a long history of conducting surveys along the northern and southern borders of México, in particular as it relates to documenting migration flows at key logistical nodes. Their academic research expertise and labor resources make them ideal partners for repeated data collection. At the time when the study was paused due to COVID-19, a total of 24 weeks of surveys had been completed from October 1, 2019 to March 17, 2020. Further data collection is prohibited until the pandemic subsides and/or a vaccine is developed to make it safe for interviewers to restart the face-to-face surveys. In addition, the restart date will have to consider restrictions imposed to non-essential travel at all land ports of entry which are impacting the movement of people across the border.

STUDY OBJECTIVES

The objectives for this study are three-fold. First, the agreement called for the development of a pilot database to begin providing policymakers, researchers and stakeholders with El Paso-Cd. Juárez crossborder travel behavior profiles, including quantifying direct expenditures. The latter helps provide an answer to the long-standing question of "how much of El Paso's retail trade can be attributed to Mexican visitors." Second, the surveys capture spending by economic activity (goods and services) which IBD will utilize to estimate the monetary impact via input-output analysis, with a focus on the significance of retail trade. This helps answer the question of "what is the economic impact of Mexican

[1] Coronado and Phillips (2007) address this using Texas border MSA secondary data to estimate consumption function regressions on the *net* retail spending exported to México. This approach provides for time and region comparisons, but key assumptions must hold and non-retail expenditures are omitted.

[2] For a synthesis of reports and research that evaluate the economic impacts of Mexican visitors see also Ghaddar and Brown (2005), Sener et al. (2012) and Fullerton and Walke (2016).

[3] In Pavlakovich-Kochi and Charney (2008), the fourth study conducted by The University of Arizona (1978, 1992 and 2002), exit surveys were administered over the year across ports, but not year-round at each individual port.

resident spending on the El Paso economy." Similarly, the corresponding economic impact of U.S. residents on the Cd. Juárez economy will be conducted by COLEF.

A third and longer term objective is year-over-year repeated data collection. This recommendation allows the city to develop a database that captures important seasonal, cyclical and structural changes between years, as well as the effects of external shocks to the bridge system. The latter is important because socio-economic, political and security factors directly and indirectly affect the volume, frequency of visits, travel mode, bridge choice, destination patterns, and spending of border crossers.[4] From both a research and policy perspective, year-over-year data capture through this agreement is a cost-effective prime opportunity to create a database unreplicated by any other border region.

Policy Applications

Recognizing that Mexican residents are an important contributor and travel segment to the El Paso economy, quantifying their expenditures and impact is beneficial in particular to two City of El Paso departments, Economic Development (ED) and Destination El Paso (DEP). For instance, these data can assist ED's business retention, recruitment and expansion efforts as companies do their due diligence (i.e., feasibility studies) on the El Paso market. Similarly, for DEP, these data are useful in tailoring marketing strategies to maximize information about El Paso's hospitality sector. More specifically, insights about Mexican resident consumption of goods and services can be used to engage: 1) existing businesses (e.g., major malls and shopping centers, top employers, hospitality sector); 2) real estate and site development stakeholders (e.g., retail, office, industrial, single and multi-family builders); 3) prospect companies (e.g., destination retail, professional business services, resorts and hospitality); and 4) prospect visitors and tourism (e.g., hospitality promotion – Cd. Juárez vs. Mexican interior). Additionally, this type of in-house information provides the city direct savings over the long-term when departments can forego the costs of hiring consultants and outside researchers to perform snapshot studies about the Mexican visitor.

METHODOLOGY

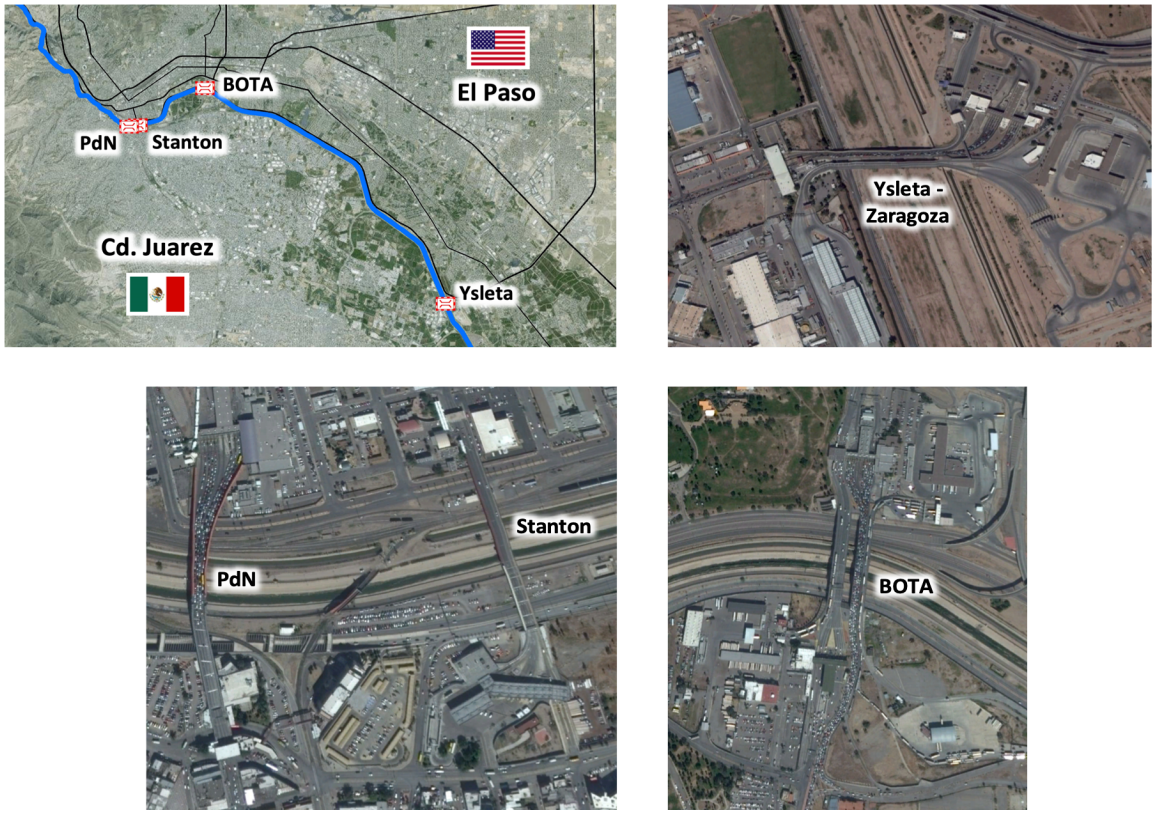
Before the survey was implemented, several tasks were accomplished from mid-August to the end of September 2019 during the design and development phase: 1) the bilingual survey instrument, technical platform and interviewer tablet app were created (survey data collection was conducted electronically); 2) the COLEF survey coordinator traveled from Tijuana to Cd. Juárez to perform the fieldwork and logistics coordination at each bridge, including to train a COLEF interview team of six (all were English proficient); 3) the survey and tablets were pre-tested for one week so that necessary improvements could be made to questions as well as to the technology before they were finalized and implemented;

[4] Prior to COVID, external shocks were understood to include factors like abrupt changes in consumer demand (e.g., a recession), significant fluctuations in the peso/dollar exchange rate, safety concerns in Cd. Juárez, and increased security at bridge inspection points. The difference between these shocks to the system and the current pandemic is that the latter not only led to the closure of bridges of non-essential travel, but also forced IBD and COLEF to shut down surveys to protect respondents and interviewers from potential infection.

and 4) a secure website connection was developed so that IBD has direct access to and can monitor the sampling frame and survey responses as they are updated (all data captured by the tablets are uploaded into a laptop and transmitted to computer servers in Tijuana by the fieldwork supervisor in charge of scheduling and quality control).

The study consisted of two surveys of different lengths. A short questionnaire was administered all days of the week from October 1 through December 31, 2019 (2019:Q4) which lasted between 5-10 minutes depending on how respondents answered. Initially, the idea was to randomly apply a longer 10-15 minute survey to a sample subset to gather additional data starting January 1, 2020. However, interviewer feedback was to simply ask questions until they had to stop (the midpoint of the bridge or until persons no longer wanted to participate), so it was decided to administer the longer version to all persons selected. Hence, data from the short survey is captured for the entire 24-week period from October 1, 2019 through March 17, 2020, while information on the longer survey is available from January 1 to March 17, 2020.

Map Montage. El Paso-Cd. Juárez International Bridges



Persons in vehicles and pedestrians were interviewed – primarily in Spanish – on the Mexican side as they crossed northbound into El Paso through PdN, BOTA and Ysleta (see Map Montage and Picture Sets 1 and 2). Unfortunately, Stanton was excluded in this pilot study because in the northbound direction it is a SENTRI vehicle only bridge and the fast flow of traffic hindered the application of the survey, a limitation also witnessed during certain times of the day at BOTA where there is no toll to create a

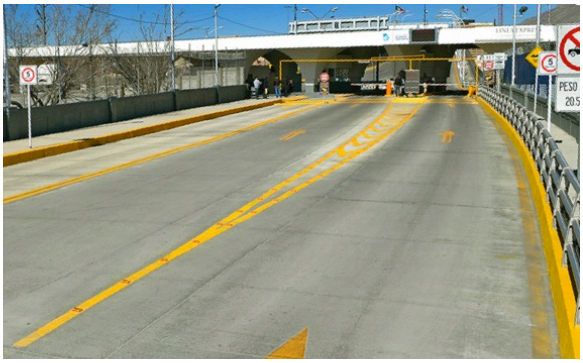
vehicle queue (see Picture Set 3). Respondents that indicated that their primary place of residence was México were given an "entry" survey (entering to visit the United States) while those that said their primary place of residence was the United States were given an "exit" survey (returning after visiting México). The distinction is that the former captures planned activities and expenditures while the latter captures activities and expenditures already made. The minimum age to participate is 15 years and all respondents were read a short script that the survey is completely confidential and voluntary.

For ease of management and reporting, the initial idea was to separate surveys and findings into quarterly periods beginning with the fourth quarter of 2019 and continuing into 2020. But as previously noted, the survey was paused in mid-March 2020 due to the COVID-19 pandemic. It was consequently decided to assess the entire 24-week period (October 1 through March 17) under one report given that the seasonal aspect IBD hoped to capture had been disrupted.

Picture Set 1. Vehicle surveys at PdN (left) and Ysleta SENTRI (right)

Picture Set 2. Pedestrian surveys at BOTA (left) and PdN (right)

Picture Set 3. Fast flow traffic at Stanton (left) and BOTA (right)



Sampling Design[5]

The IBCS strategy involves a spatial and temporal dimension that uses **stratified random sampling** to minimize sampling error and make statistical inferences; that is, to be able to say with high confidence that the sample of persons surveyed is representative of the larger population of personal crossings. In this design context, stratification involves dividing the pedestrian and vehicle population counts into strata such that each represents an independent sample from which to draw on. The strata are constructed from the sampling frame of historical hourly crossings by bridge, mode and shift obtained from the U.S. Customs and Border Protection (CBP 2019). More so, the strata are used to distribute the 174 primary sampling units (PSUs) that were determined a priori (by the budget constraint). To further explain this, consider the following steps:

1) combining bridge with mode generates seven bridge-mode points – PdN pedestrians, PdN vehicles, BOTA pedestrians, BOTA vehicles, Ysleta pedestrians, Ysleta vehicles, and Yselta SENTRI;[6]
2) shifts are divided into a morning (7 a.m. to 3 p.m.) and afternoon (3 to 11 p.m.) shift so in total there are 7 X 2 = **14 bridge-mode-shift strata** (these are spatial dimensions of the design, see Figure 1);[7]
3) using historical fourth quarter 2018 data, the number of crossings for each stratum is calculated;
4) the percent of crossings for each stratum is calculated by dividing the stratum crossings by the total crossings from the combined 14 strata (this percent represents a distribution weight);

[5] The conceptual and methodological background originates from the Encuesta sobre Migración en la Frontera Norte de México (EMIF) which has been conducted since 1993 across Mexican cities on the northern border and subsequently applied on the southern border since 2004.

[6] The term "vehicles" in this report refers to crossings via both standard and ready lanes. Ready lanes provide an expedited inspection process for travelers who have a radio frequency identification or RFID-enabled travel ID. Over time, it is expected that almost all travelers will have ready lane access as persons update their identification and this technology becomes norm. SENTRI refers to the Secure Electronic Network for Travelers Rapid Inspection which allows expedited clearance in stand-alone lanes for pre-approved, low-risk travelers. Applicants go through a rigorous background check and in-person interview.

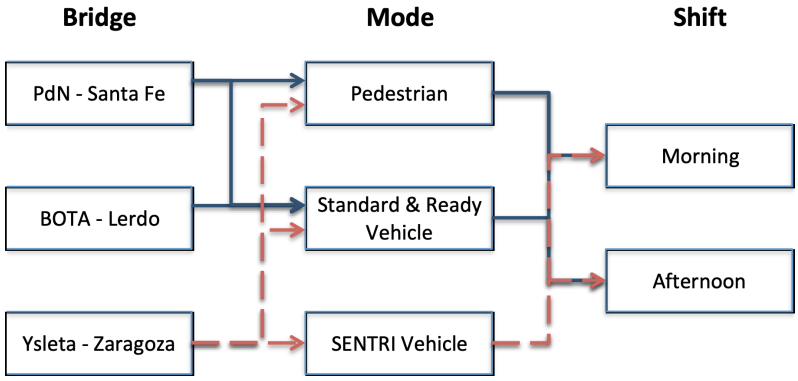
[7] The hours from 11 p.m. to 7 a.m. are excluded from the sampling frame because of interviewer security concerns. Although a small percent of the overall crossings take place during these hours, some interesting characteristics are lost from weekend travelers that anecdotally are crossing for social and entertainment reasons.

5) the distribution weights from step 4 are used to determine the total number of days to survey for each stratum during the fourth quarter of 2019 (e.g., the budget called for a total of 174 bridge-mode-shifts to conduct interviews for the 2019:Q4 period, so if the distribution weight for the PdN pedestrian morning stratum is 0.12, then 174 X 0.12 = 21 morning shifts of surveys are allotted for PdN pedestrians);[8]

6) the stratum shifts in step 5 are selected using **simple random sampling without replacement** for the 2019:Q4 period (e.g., for the temporal dimension of the sample design, there are 92 days in 2019:Q4, so each day has a 21 / 92 = 23% chance of being selected for surveys); lastly,

7) the same method is administered for 2020:Q1.

Figure 1. Fourteen strata by bridge-mode-shift



A next level of **random selection** is applied in multiple stages during the implementation of the survey interviews. In the case of vehicles, the interviewers begin the start of their shift at a pre-determined imaginary line set by the survey coordinator during the IBCS project design phase and selects the first vehicle in the lane leading to the international border (prior to the toll booth at PdN and Ysleta; there is no toll at BOTA). In the following step, if the vehicle selected has a lone driver, that person is asked to participate after verbally verifying he/she is 15 years or older; if there are multiple persons 15 years and older, in order to reduce the bias of selecting only the driver, the interviewer enters the group number into the tablet and activates a random number generator that determines who to ask to participate – the driver is person 1 followed by the front passenger and so forth in a clockwise direction. Interviewers are permitted to follow the vehicle up to the international boundary to administer the survey.[9] Once a survey is finished, the interviewer returns to the imaginary line. In the third stage, the interviewer switches to the adjacent lane – if there is more than one lane – and repeats the process. Although standard and ready lanes are segregated for more efficient inspection once they reach the U.S. side, it is possible for crossers to switch lanes while on the bridge (ready users can use both lane types). For this

[8] 2018:Q4 crossings are a good proxy for the strata distribution in the future 2019:Q4 period since it accounts for seasonality (all that matters is a good distribution weight estimate, not the number of crossings).

[9] During the IBCS development phase, IBD and COLEF received official permission from Fideicomiso (the tolling agency in Cd. Juárez) and Mexican Aduanas to allow interviewers to survey within the tolling spaces and up to the top or mid-point of the international bridges (interviewers were instructed not to cross into the United States).

reason, respondents are asked which type of lane they plan on using to cross. Note that this process demonstrates that the unit of analysis is the personal bridge crosser, not the vehicle.

The process for pedestrians is similar with some variation. For the tolled bridges, the imaginary line begins immediately after the turnstiles after a toll is paid. At this point, the interviewer obtains a randomly generated number from the tablet then counts the people crossing this line and asks the selected person to participate (15 years and older). The questionnaire is applied from that start point up to the top of the bridge if need be, then returns to the imaginary line and repeats the process. In the case of BOTA where tolls are not collected, the imaginary line starts from the cyclonic chain-linked fence of the pedestrian walkway at the bottom of the bridge. Otherwise, the process is the same.

Sample Weights

A total of 14,719 surveys were captured during the 24-week period. To be considered in this analysis, however, the decision rule is that respondents answer question 8 of the survey asking their main reason for crossing (questions 1 through 7 capture demographics and residence). The final ***unweighted*** sample size is 8,623 after applying this constraint.

Sampling weights are next generated using bridge, mode and shift information from 1) the actual number of crossings from CBP [10] and from 2) the individual and group number of persons captured by surveys. Additionally, 3) a temporal factor is created so that the spatial information from steps 1 and 2 is adjusted to represent information across the study period (24 weeks in this case). These weights are applied to create a ***weighted*** sample representative of a population size of 7,617,473 personal crossings. Statistically the ***number of crossings is synonymous with crossers with replacement*** since they can take multiple trips (the terms crossings, crossers and users are used interchangeably in this report understanding this caveat). Applying weights is the final step of the sampling design to make statistical inferences and generalize the results from the sample to a population.

Figure 2. Sample (left) vs. population (right) distribution by bridge and mode

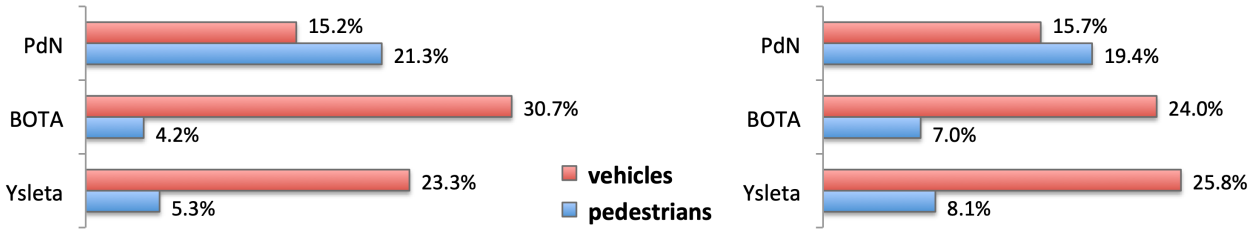


Figure 2 provides a comparison of the distributions between the unweighted vs. the weighted sample. In the former, PdN pedestrians and persons in BOTA vehicles were overrepresented which the latter redistributes, meaning that 1) BOTA and Ysleta pedestrian responses are given slightly more weight, as well as 2) persons in PdN and Ysleta vehicles. This exemplifies how sampling weights statistically

[10] Recall that historical crossings are used to generate the sampling frame for the application of surveys. But once these surveys are completed, the actual crossings for that respective period are known from the same CBP source.

compensate for over or under sampling of a particular bridge-mode-shift stratum. It should be clarified that because of the rigor of the survey sampling design and the large sample size achieved, the results in percentage terms between the unweighted and weighted samples do not differ substantially; nonetheless, these slight adjustments are made to further improve external validity (generalizability).

Figure 3. Weighted survey shares by shift

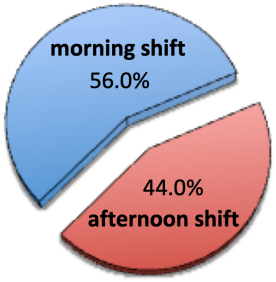
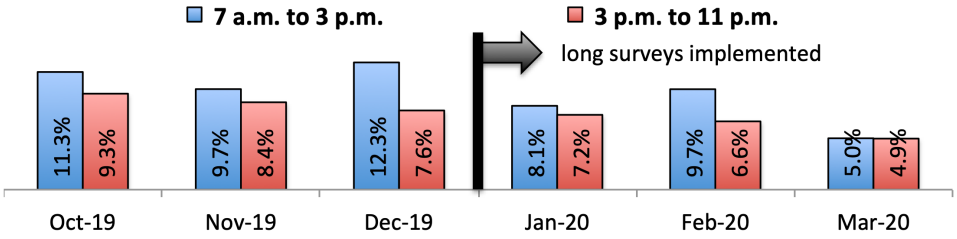


Figure 4. Weighted survey shares by month and shift



Note: Only 17 days of surveys are counted in March.

The following section documents the weighted results from the short survey from October 1, 2019 to March 17, 2020 comprised of 15 questions (see Appendix I). Themes covered include basic demographics, place of residence, reason for travel, expenditures, length of stay, crossing frequency, and wait times. Fifty-six percent of the responses are based on surveys from the morning shift (Figure 3), with the largest share conducted during the month of December 2019 (Figure 4).

FINDINGS

Demographics

Geography and population play an influential role in how international ports of entry (POE) are used as access points. In the case of El Paso-Cd. Juárez with a population of 2.3 million, Figure 5 and Table 2 lend support to what is anecdotally understood, that most of the travel through the POE is local. México is the primary place of residence for three-fifths (60%) of the personal crossings, with the majority originating from Juárez Municipio (59%) followed by El Paso County (37%). This trend is also a result of the strong and interdependent manufacturing and just-in-time linkages not witnessed in other border city pairs where work related activities provide the impetus for continuous flow of crossers. Contrast this with other important POEs such as Brownsville, Hidalgo and Laredo that serve as pass through

points for a substantial share of visitors from the Mexican interior with disposable income and who go to the interior of Texas for shopping and entertainment in places like San Antonio, Austin or Houston.

Less than three percent of the individual crossings are tied to a primary residence outside of the Paso del Norte region (Cd. Juárez, El Paso and Doña Ana). Most of these bridge users come from other parts of Chihuahua, Texas and New Mexico, followed by a minority from California, Colorado, Arizona, as well as from México City, Coahuila, Durango, and Jalisco in México. At the county level, the largest U.S. contingency of crossers reside in Ector (home to Odessa), Hidalgo, Dallas and Harris in Texas; Bernalillo, Otero, Eddy, and Luna in New Mexico; Denver and Adams in Colorado; Maricopa in Arizona; and Los Angeles and San Diego in California. It is noteworthy that the Midland-Odessa MSA is the epicenter to the oil rich Permian Basin and is a pull factor for economic migrants from El Paso. Hence, many of these workers have homes or living arrangements in both areas so it is not surprising that Ector County ranks first for non-local bridge users. The top visitors from México at the municipality level include Chihuahua, Torreón, Ahumada, Delicias, Durango, and Guadalajara. (In the remainder of the paper, the operational concept of primary place of residence is used interchangeably with the terms "MX residents" or "US residents" for short. In addition, to reiterate footnote 5, the term "vehicles" refers to both standard and ready lanes.)

Figure 5. Country primary place of residence

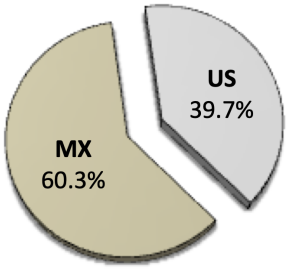


Table 2. Substate place of residence (%)

Juarez Municipio	**58.9**
El Paso County	**37.3**
Dona Ana County	1.2
Chihuahua Municipio	0.9
Other Texas place	0.2
Other New Mexico place	0.1
Other Chihuaua place	0.1
Other US place	0.8
Other MX place	0.6

Figure 6. Mode of travel

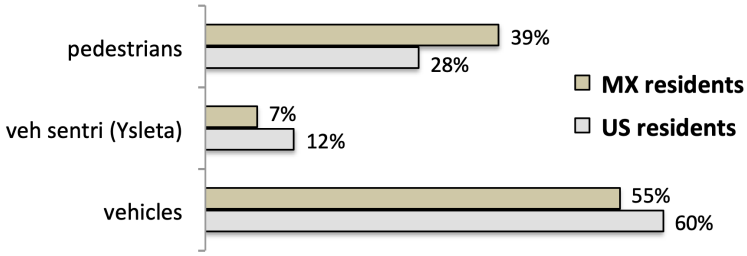


Table 3. Vehicle type (%)

	MX	US
car	58.4	40.3
suv	18.3	22.8
truck	15.2	25.9
van	7.8	10.3
other	0.22	0.66

A review of the mode of travel in Figure 6 highlights that two in five (39%) residents from México cross by foot, which drives public transportation especially through the PdN bridge. Indeed, Sun Metro has the Downtown Santa Fe Transfer Center to meet this demand. On the vehicle side, a greater percentage

(72%) of U.S. residents drive into Cd. Juárez, and more likely to do so in a SUV or truck (Table 3). Vehicles are also correlated to group travel, with roughly one-third crossing with two or more persons (Figure 7).

The gender distribution between México and U.S. residents is practically the same, with men comprising three out of five of the bridge crossings (Figure 8). Survey responses indicate that this difference is the result of more men driving across, versus the gender breakdown among pedestrians that is practically even (Table 4). Among aspects to consider for this dichotomy are differences in consumption practices, expectations about wait times or reason for travel. As will be discussed shortly, this is explained to a large extent by the finding that more men are crossing for work related reasons making reliable private transportation essential.

Figure 7. Group size by mode

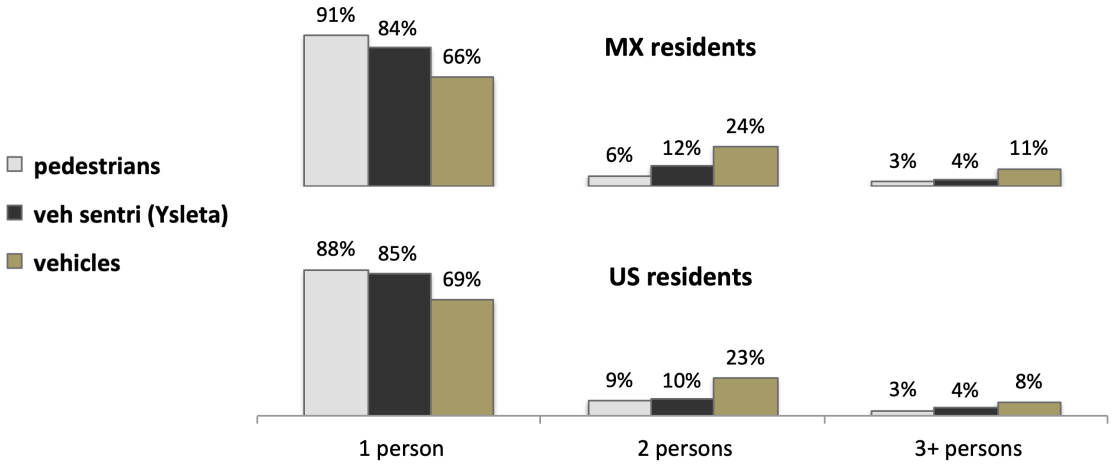


Figure 8. Gender

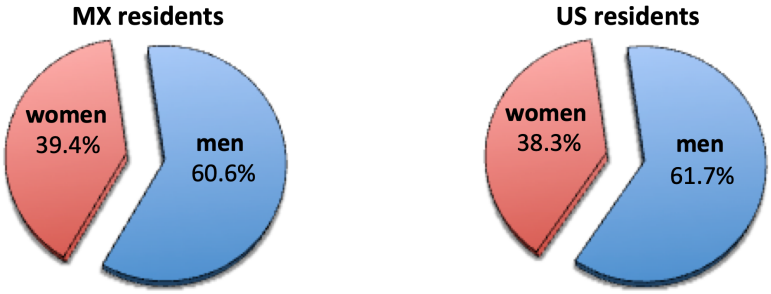


Table 4. Gender by mode

	MX (%)		US (%)	
	women	men	women	men
vehicles	31.4	**68.6**	32.8	**67.2**
veh sentri (Ysleta)	35.5	**64.5**	36.5	**63.5**
pedestrians	51.5	48.5	50.8	49.2

México residents are on average younger than their U.S. counterparts (39.1 vs. 46.3 years old, respectively). However, simple averages can confound important information. Figure 9 illustrates the age group distributions by gender for both populations and two patterns emerge: 1) México residents are more likely to be between the ages of 20 and 39, and this holds for both women and men as each account for half of their respective total crossings; while 2) U.S. residents are more likely to be older men 50 years and older – for instance, this age group comprises 53% of total U.S. male crossings but among women the distribution is relatively flat meaning every female age group is about the same (around 20%) with the exception of ages 15 to 19 (only 4%).

Figure 9. Age groups by gender

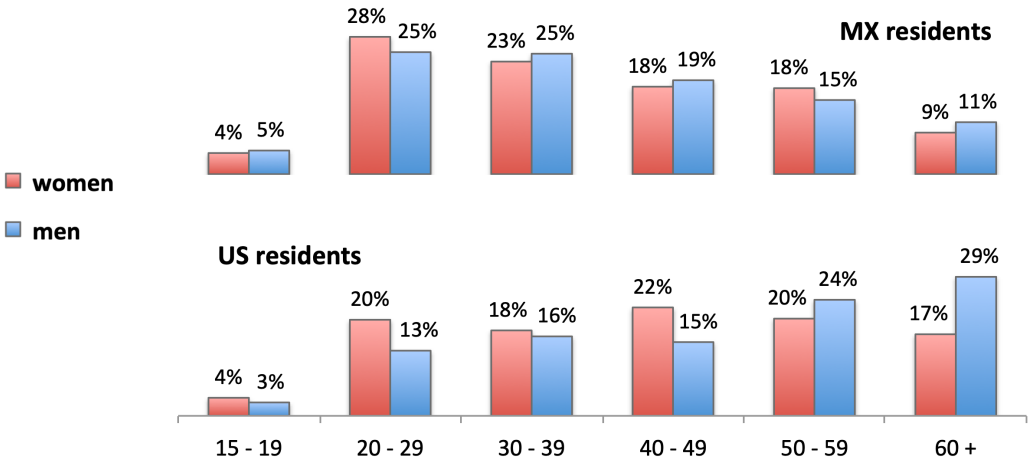
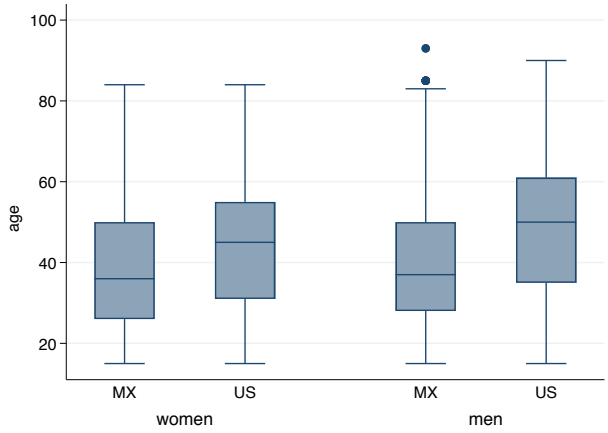


Figure 10 illustrates the age interquartile range (25th, 50th and 75th percentiles) by gender and country, and below are corresponding summary statistics:

- MX resident means (medians) – women 38.6 (37) and men 39.4 (36)
- US resident means (medians) – women 43.4 (50) and men 48.2 (44)

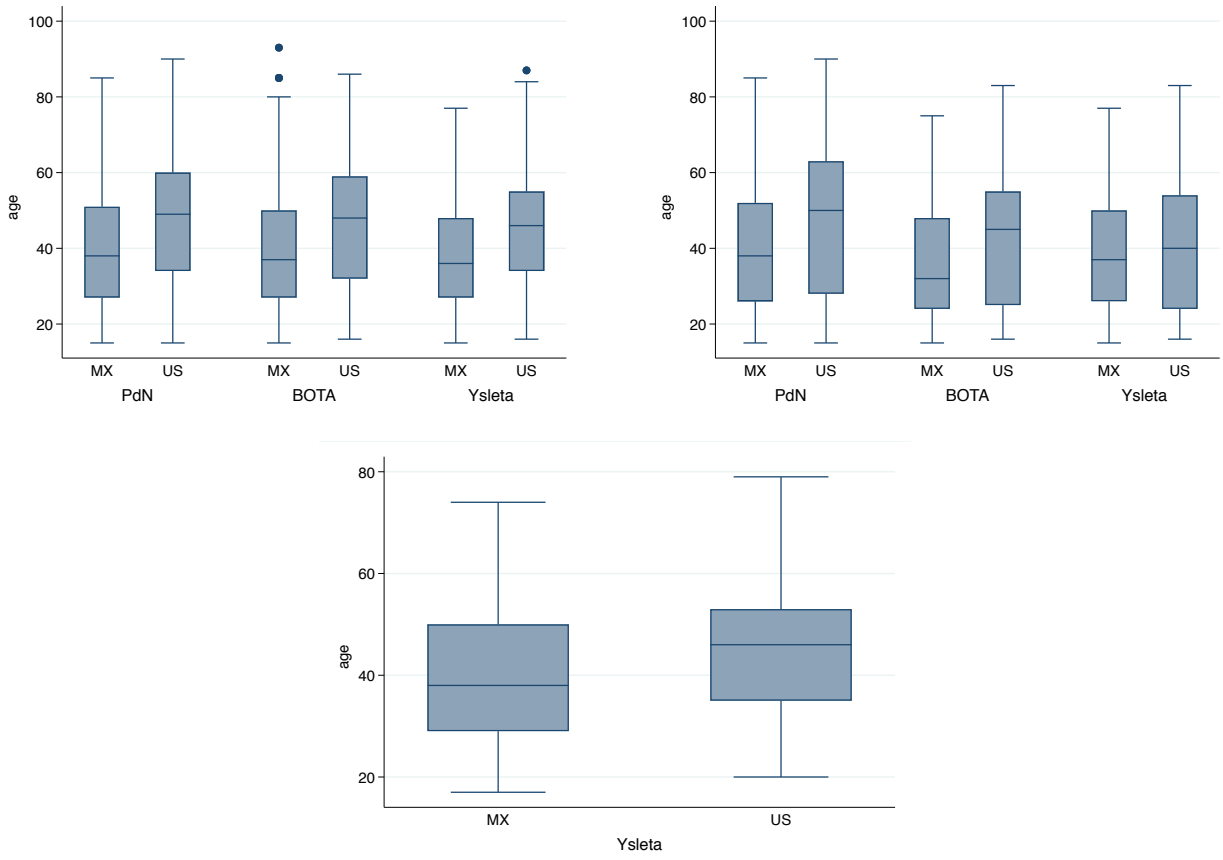
Figure 10. Age by gender boxplots



Additional analysis of age distribution shows that there is little variance by mode among México residents, but among U.S. residents, SENTRI users through Ysleta are more likely to be middle-aged, 30 to 49 years old. The boxplots in Figure 11 also show the following travel patterns at the bridge level:

- comparing U.S. and México residents separately, the age interquartile range for vehicles is similar across bridges;
- U.S. pedestrians that cross through PdN tend to be older (relative to BOTA and Ysleta); and
- SENTRI users residing in the U.S. are older than those residing in México.

Figure 11. Age by bridge boxplots (vehicles top left; pedestrians top right; SENTRI bottom)



Reasons for Crossing

This section summarizes the primary and secondary reasons for travel through the El Paso-Cd. Juárez POE (note that only a subset provided a secondary motive). The top two reasons are combined and presented in Table 5 where México and U.S. residents account for, respectively, 58.8% and 41.2% of this weighted sample. Recall that 96% of crossborder trips are local so these answers are largely representative of local motives for crossing.

Crossborder spending is an important driver of the border economy. Not surprisingly then, survey results show that shopping is the top reason for two-fifths (40.5%) of the northbound crossers residing

in México. Disposable income, the exchange rate and sales taxes are influential factors in their decision to travel and spend in El Paso. Indeed, Mexican border shoppers are well aware with specific promotional days such as Black Friday or tax-free weekends. In the southbound direction, price differentials and the exchange rate make it less expensive for U.S. residents to shop (14.9%), eat/drink (4.7%) and take advantage of medical (8.1%) and various other services in Cd. Juárez.

The border region is also built on historically long and strong family and work ties. This is reflected by the finding that southbound U.S. visitors largely cross for social (55.7%) and work related (9%) activities. By comparison, social and work related reasons comprise 25.4% and 20% of northbound México resident trips, respectively. Family is clearly a critical reason for crossing back and forth, and the work category reflects the importance of employment and income opportunities in El Paso for Juarenzes, as well the flow of El Paso residents who work in the maquiladora industry and complementary activities.[11]

Table 5. Top two reasons for crossing (%)

	MX	US		MX	US
shop	**40.7**	**14.9**	**job or work**	**16.9**	**6.9**
eat/drink	1.4	**4.7**	business activity	3.1	2.1
health visit	1.0	**8.1**	**school attend**	**3.9**	1.5
social family	**16.8**	**37.9**	school drop/pick up/activity	1.6	0.8
social friends	2.0	3.2	drop/pick up person	2.6	2.4
social activity	2.1	3.8	vacation	0.8	0.9
going to a house	4.5	**10.8**	other	2.7	2.2

Table 6. "Social event" breakdown

	MX	US
social unspecified	**68.1**	**52.3**
social party/birthday	8.7	7.0
social religious	6.1	17.1
social wedding	0.9	1.1
social funeral/cemetery	1.3	6.5
social sport	6.6	12.4
social music	3.1	1.9
social movies	0.0	0.7
social casino	5.3	1.1

Table 7. "Other" breakdown

	MX	US
permit/visa/consulate	**39.3**	5.2
mechanic/repairs/car wash	4.5	**31.6**
put gas	**20.2**	-
personal care	0.5	**22.1**
dentist/eye doctor/vet	0.5	11.9
donate plasma	1.3	-
drop off/pick up something	17.0	10.1
bank/make payment	10.9	8.4
other misc	5.9	10.8

In Tables 6 and 7 a breakdown is provided for the Table 5 categories of "social activity" and "other." In the former, church and entertainment activities stand out (for instance, of the 3.8% of U.S. residents who answered "social activity," 24.7% said they were visiting México for a religious, wedding or death

[11] For the category "job or work" in Table 5, it is possible that some respondents who provided this answer may not have actually meant employment in the other city. For instance, they may have meant that they were attending a business meeting or conference. That said, it is likely that they were in fact indicating crossing to get to their job, but given this small uncertainty it is safer to generalize the category as work related or work activities.

event). The top "other" responses for México residents were 1) visiting CBP offices or the Mexican Consulate to apply for or gather information about a permit or related travel documents, and 2) crossing into El Paso to put gas (which is also a shopping activity). For U.S. southbound travelers, the top "other" categories include visiting Cd. Juárez to take their vehicles to a mechanic or for appliance repairs, followed by personal care services such as getting a hair cut, manicure, facial, etc.

Various cross tabulations are performed to identify group differences in the reasons for travel (categories are aggregated for ease of analysis). In Table 8, vehicle passengers and pedestrians exhibit similar reasons for crossing and they mirror the total findings in Table 5 for the most part. The primary motives for Ysleta SENTRI users, however, differ in that their crossings are more linked to school and work. This is especially evident for U.S. residents with almost one-third (31.2%) returning from work or business in Cd. Juárez, likely commuters who are employed in maquiladoras in the east part of town. Recall that surveys are not performed at the Stanton bridge due to the fast flow of the traffic. This is important because it is believed that work related travel is even greater among Stanton SENTRI users who attend meetings and conduct business in the El paso downtown district.

Table 8. Reasons for crossing by mode

Pedestrians			Vehicles			Vehicles SENTRI (Ysleta)		
	MX	**US**		**MX**	**US**		**MX**	**US**
social	**28.3**	**58.0**	**social**	**24.3**	**55.9**	**social**	**17.2**	**47.4**
shop	**37.8**	**14.7**	**shop**	**43.4**	**16.2**	**work related**	**28.5**	**31.2**
work related	**17.7**	4.5	**work related**	**20.4**	7.4	**shop**	**34.3**	6.9
health visit	1.3	**8.9**	**health visit**	0.9	**8.2**	**school related**	**13.3**	4.2
school related	6.4	3.3	school related	4.0	1.5	health visit	0.7	5.4
eat/drink	1.5	6.2	eat/drink	1.4	4.6	drop off/pick up	1.4	0.2
drop off/pick up	2.7	1.5	drop off/pick up	2.8	3.2	eat/drink	0.8	1.0

A review by gender (Table 9) and ages (Table 10) shows the following notable within group differences:

- women are more likely to cross to shop or for social (family) and health visits;
- men, especially residing in México, are more likely to cross for work related reasons;
- among Mexican resident crossers
    - social visits are directly correlated with age – the older the age group, the greater the share of social visits,
    - attending school is indirectly correlated with age, and
    - middle aged and older groups (30+) are more likely to cross for shopping; and
- among U.S. resident crossers
    - social visits are negatively correlated with age – the younger the group, greater the share of social visits, and
    - health visits are positively correlated with age.

This section has provided important profiles regarding the primary motives behind crossborder travel between El Paso and Cd. Juárez. In short, survey results show that shopping in El Paso is the most

important reason especially for women and the 30 to 49 middle age group from México. Meanwhile, social family gatherings in Cd. Juárez are the main motivation for U.S. residents, especially for the younger under 30 age group.

Table 9. Reasons for crossing by gender

Women	MX	US
social	**27.2**	**57.6**
shop	**43.6**	**16.7**
work related	**12.9**	4.7
health visit	1.5	**9.4**
school related	7.3	3.0
drop off/pick up	2.7	2.5
eat/drink	1.3	3.8

Men	MX	US
social	**24.1**	**54.4**
shop	**38.8**	**13.7**
work related	**24.4**	**11.8**
health visit	0.8	7.3
eat/drink	1.5	5.3
school related	4.3	1.7
drop off/pick up	2.6	2.3

Table 10. Reasons for crossing by age groups

Under 30 years	MX	US
social	**20.6**	**66.1**
shop	**32.7**	**12.1**
work related	**27.0**	4.8
school related	**12.4**	4.7
health visit	1.3	4.1
eat/drink	1.3	3.9
drop off/pick up	1.9	2.2

30 to 49 years	MX	US
social	**24.6**	**54.1**
shop	**45.7**	**15.0**
work related	**18.1**	**10.1**
health visit	0.8	7.7
school related	2.5	3.2
eat/drink	1.4	4.2
drop off/pick up	2.7	2.6

50 or over years	MX	US
social	**31.4**	**52.3**
shop	**41.5**	**15.6**
work related	**15.3**	**10.1**
health visit	1.1	**10.1**
eat/drink	1.6	5.5
drop off/pick up	3.3	2.4
school related	2.3	0.6

Spending by Economic Activity

Crossborder shopping is crucial to the local economies, yet until now little was known about the actual size of the expenditures, to which this study contributes. This section quantifies the spending across the economy for both directions of travel, providing the necessary information to better estimate the size of El Paso retail activity that is comprised by México residents, and vice versa. To isolate the amount and impact of local crossborder spending, respondents that indicated that they were only passing through for vacation purposes were excluded in this part of the analysis.

U.S. residents were asked whether they spent any money (via the exit surveys) while Mexican residents were asked if they planned to make a purchase (via the entry surveys). This served as the conditional question – if they said yes (regardless of amount, it could be $1 or $1,000), respondents were then asked to provide specific dollar amounts for each type of good or service purchase. Figure 12 shows that 72% of southbound and 65% of northbound visitors said that they made or expected to make a purchase while on the other side of the border.

In Table 11, it appears that individuals who cross through PdN in either direction are slightly more likely to spend something, while those traveling through Ysleta are less likely to spend. A breakdown by mode shows that Ysleta SENTRI users are also the least likely to make some type of expenditure (Table 11). This is in line with Table 8 findings that Ysleta SENTRI crossers mainly cross for work or school reasons and less for shopping. In Figure 13, responses indicate that men are slightly more likely to buy something than women. With the exception of the younger 15 to 19 age group which overall has less disposable income, the spending distribution is relatively flat for all other age groups, meaning that roughly the same percent said yes to spending (Figure 14).

Figure 12. Spenders

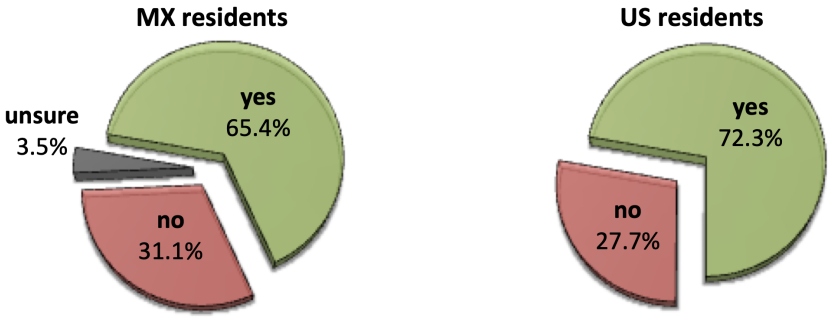


Table 11. Spenders by bridge and mode (% yes)

	MX	US
PdN	**69**	**77**
BOTA	66	72
Ysleta	61	68
vehicles	70	75
veh sentri (Ysleta)	**49**	**60**
pedestrians	62	72

Figure 13. Spenders by gender (% yes)

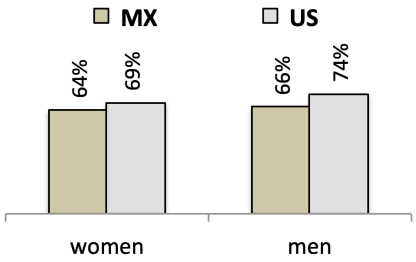
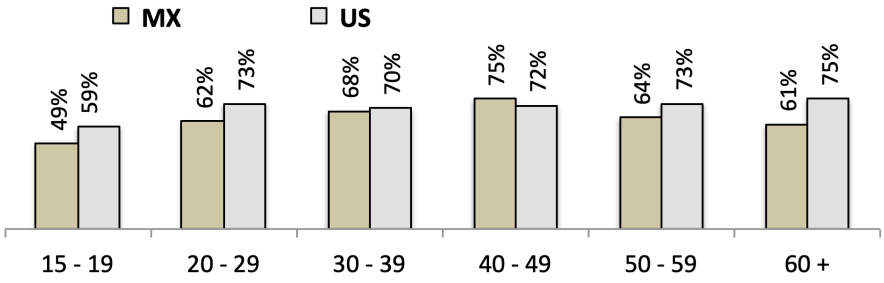


Figure 14. Spenders by age group (% yes)



To quantify the types of purchases and their amounts, the survey captured detailed information that researchers are able to correspond to the North American Industry Classification System (NAICS). NAICS is a 6-digit hierarchy that classifies establishments according to economic activity. NAICS 2-digit represents *sectors*, the most aggregate measure of economic activity, while 5- and 6-digits represent

industries, the most detailed measure. For this analysis, expenditures are coded using NAICS 3-digit *subsector* and 4-digit *industry group* establishment categories (4-digits were used if the data were available and more detail added value to the analysis). Table 12 below provides the spending results from the 24-week period starting October 1, 2019 and ending on March 17, 2020.

The key finding in Table 12 is the high level of retail activity among México residents – 78% of the planned purchases fall within the rubric of retail trade (NAICS 44 and 45). In other words, almost four out of five shopping visits are tied to a retail establishment while the remaining one out of five visits are for a service expenditure. By comparison, U.S. residents split their spending roughly half and half between retail (53%) and service (47%) establishments.

The top retail store types for México residents who shop in El Paso include:

1) *clothing & accessories* (26.3% of total visits / $150 average spending);
2) *food & beverage* (17.6% / $72);
3) *general merchandise* (14.4% / $158); and
4) *gasoline stations* (9.6% / $36).

Note that general merchandise includes department stores, warehouse clubs and supercenters so consequently covers malls, Walmarts, Sam's Clubs, etc. (but also note that respondents may have been indicating a clothing store within a mall, so there is some overlap in these categories). Among U.S. residents who shop in Cd. Juárez retail stores, the largest share that are frequented are:

1) *food & beverage* (31.6% / $86); followed to a smaller extent by
2) *health & personal care* (8.5% / $177); and
3) *general merchandise* (4.5% / $277).

On the services side, *restaurants* are the top category for both México (16.8% / $49) and U.S. (25.8% / $94) residents. This represents the second largest establishment category for spending by U.S. residents who cross into Cd. Juárez and on average, spend almost twice as much as their Mexican counterparts who visit El Paso eateries. *Offices of physicians, health practitioners & related medical services* (9.5% / $229) further comprise a substantial share of the service visits by U.S. residents, and to a smaller but noticeable extent, *offices of dentists* (2.6% / $184) and *repair & maintenance services* (2.1% / $125). These results support the idea that less expensive medications and health, optometry and dental care services are primary economic motivations for U.S. crossborder shoppers who may lack medical insurance or want medicine without prescriptions.

Table 12. Expenditure establishments (MX N = 2,252,863; US N = 1,771,600)

		% of spending visit		avg. spending	
	NAICS	**MX**	**US**	**MX**	**US**
423	wholesale durable goods	0.65	0.22	$268	$458
4411	auto dealers	0.17	-	$2,849	-
4413	auto parts & accessory stores	**2.43**	0.87	**$203**	$392
442	furniture & furnishings stores	**1.00**	0.55	$127	$267
443	electronics & appliance stores	**2.05**	0.72	**$249**	$169
444	building materials & garden supply	0.75	0.84	$200	$342
445	food & beverage stores	**17.59**	**31.63**	**$72**	**$86**
446	health & personal care stores	**1.65**	**8.52**	$88	**$177**
447	gasoline stations	**9.57**	**1.97**	**$36**	**$36**
448	clothing & accessory stores	**26.34**	**1.70**	**$150**	$73
451	sporting, musical & books stores	**1.44**	0.40	$169	$260
452	general merchandise	**14.36**	**4.48**	**$158**	**$277**
453	misc store retail	0.87	0.83	$115	$57
485	ground transport	**1.40**	0.85	$10	$11
4852	interurban transport	0.38	0.28	$298	$146
5121	motion picture (theatres)	0.14	0.81	$16	$37
522	credit intermediation	0.28	0.05	$128	800
524	insurance carriers	0.11	-	$56	-
531	real estate	0.05	0.21	$50	$401
5419	other professional services	-	0.26	-	$157
5614	business support services	0.25	0.02	$65	$200
611	educational services	-	0.13	-	$3,500
621	physicians, health pract. & medical	0.28	**9.52**	$88	**$229**
6212	dentists	0.02	**2.58**	$50	**$184**
622	hospitals	0.23	0.52	$427	$727
624	social assistance	-	0.07	-	$74
711	arts, spectator sports & music	0.14	0.65	$33	$129
712	museum, zoo, park, & historic sites	-	0.15	-	$45
713	amusement, gambling & recreation	0.14	0.30	$191	$285
721	hotel or rooming	0.05	0.10	$384	$297
7224	drinking places	0.54	**1.38**	$38	$84
7225	restaurants	**16.82**	**25.84**	**$49**	**$94**
811	repair & maintenance services	0.22	**2.07**	$347	**$125**
812	personal care services	0.07	**1.50**	$44	$269
	Total	100.00	100.00		

Note: "-" indicates that the sample size is too small for statistical inference.

In Figure 12 above a larger share of U.S. residents are more likely to spend (regardless of amount) than their Mexican counterparts, but also recall that three-fifths of the crossers are primary residents of México (Figure 5). Hence, to understand the total monetary impact of each resident group the dollar amounts of the expenditures must be taken into account. Table 13 provides a summary of the total spending over the 24-week survey period.

Estimates from the IBCS find that 87% of the total crossborder expenditures by México residents to El Paso is in retail, versus 48% by U.S. residents to Cd. Juárez. Indeed, residents from México spend almost twice as much (1.91) than their U.S. counterparts in the retail trade sector ($226.7 vs. $118.8 million). Conversely, U.S. residents purchase over four times as much (4.36) on services than their Mexican counterparts, primarily at restaurants ($43.1 million) and in health related ($38.6 million) visits. (Expenditures will be covered in greater detail in the follow up economic impact study.)

Table 13. Expenditures (in millions) – October 1, 2019 to March 17, 2020

	MX		US	
wholesale	$3.92	1.5%	$1.75	0.7%
retail	$226.74	87.3%	$118.78	48.1%
services	$29.05	11.2%	$126.62	51.2%
total	**$259.71**		**$247.14**	

Table 14. Expenditure establishments by gender – MX residents

	NAICS	000s N	% women	% men	avg. spend women	avg. spend men
445	food & beverage stores	396	44	56	$68	$76
447	gasoline stations	216	27	**73**	$33	$37
448	clothing & accessory stores	593	50	50	$109	**$189**
452	general merchandise	324	45	55	$89	**$214**
7225	restaurants	379	28	**72**	$42	$52

Table 15. Expenditure establishments by gender – US residents

	NAICS	000s N	% women	% men	avg. spend women	avg. spend men
445	food & beverage stores	560	40	**60**	$78	$90
446	health & personal care stores	151	46	54	$179	$176
452	general merchandise	79	35	**65**	$304	$263
621	physician, health & med.	169	41	**59**	$177	**$266**
6212	dentists	46	35	**65**	$217	$166
7225	restaurants	458	37	**63**	$66	**$110**

Table 16. Expenditure establishments by age group – MX residents

		000s	%			avg. spend		
	NAICS	N	<30	30-49	50+	<30	30-49	50+
445	food & beverage stores	394	25	**49**	26	$47	$79	$83
447	gasoline stations	210	28	**49**	23	$31	$40	$36
448	clothing & accessory stores	589	34	**46**	20	$141	$157	$145
452	general merchandise	312	26	**48**	27	$111	$100	**$312**
7225	restaurants	370	35	**49**	16	$30	**$61**	$50

Table 17. Expenditure establishments by age group – US residents

		000s	%			avg. spend		
	NAICS	N	<30	30-49	50+	<30	30-49	50+
445	food & beverage stores	547	18	36	**46**	$79	$90	$87
446	health & personal care stores	149	9	34	**57**	$107	$153	**$207**
452	general merchandise	77	18	**42**	**41**	$147	**$291**	**$331**
621	physician, health & med.	167	10	36	**54**	**$282**	$216	$231
6212	dentists	46	14	19	**66**	$223	$84	$204
7225	restaurants	455	21	35	**44**	**$128**	$79	$91

Tables 14 through 17 above provide group spending differences by gender and age group for the top NAICS subsectors and industry groups. There are three clear outcomes: 1) men make the majority of purchases and spend more on average with few exceptions; 2) among México residents, the middle-aged group is the largest consumer of U.S. retail goods and restaurant service; and 3) among U.S. residents, the oldest age group is the largest consumer of Mexican goods and services.

Trip Characteristics

To conclude the findings section, a series of questions captures the length of visit, where persons stay, frequency of crossings, and feedback on wait times. The vast majority of persons that cross – in both directions of visits – stay between two and nine hours as shown in Table 18, while between 2-3 percent make quick trips under 60 minutes, likely to pick up or drop off something or someone. In addition, 21% of México and 29% of U.S. residents say they stay crossborder for at least 24 hours. Figure 15 illustrates where people stay if it was an overnight visit – most with family while 6% in both directions responded that they use hotel accommodations.

Figures 16 through 18 illustrate the frequency of times persons have crossed both by vehicle or on foot in the last 30 days from the time they took the survey. For regular vehicle (standard and ready) crossings, 29% and 20% of México and U.S. residents indicated they had not driven to El Paso in the previous month, respectively, while 34% and 32% drove across the border five more times. By comparison, SENTRI users apply for expedited clearance; not surprisingly then, most persons driving through the SENTRI vehicle lane at Ysleta are high frequency crossers with 74% of México and 67% of U.S. residents making five or more trips in the last 30 days. When respondents were asked the number of times crossing by foot, a substantially larger share cross very few times if at all (49% of México and

57% of U.S. residents had not walked across in the past month). In sum, travel across the El Paso-Cd. Juárez POE is more prevalent if the mode of travel is by vehicle, especially if they have SENTRI access.

Table 18. Length of crossborder visit

minutes	MX %	US %
< 30	0.8	1.3
30	1.5	1.1
31-59	0.3	0.3
total	2.6	2.7

hours	MX %	US %
1	5.3	4.0
2	**14.7**	**10.9**
3	**13.1**	**11.2**
4	**10.3**	**10.7**
5	**11.3**	**8.8**
6	5.9	7.6
7-9	**10.5**	**9.9**
10-20	5.8	5.2
total	**76.9**	**68.2**

days	MX %	US %
1	**11.0**	**13.3**
2	3.4	8.8
3	2.3	3.3
4-7	2.7	2.3
8-14	0.5	0.9
15-30	0.3	0.4
31-60	0.3	0.0
> 60	0.0	0.1
total	20.5	29.1

Figure 15. Where stay if overnight visit (MX N = 366,052; US N = 451,013)

Figure 16. Frequency of (standard and ready) vehicle crossings in past month

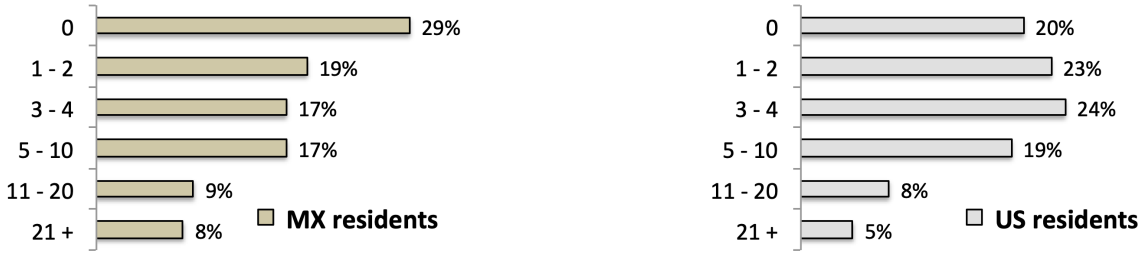


Figure 17. Frequency of (Ysleta) SENTRI vehicle crossings in past month

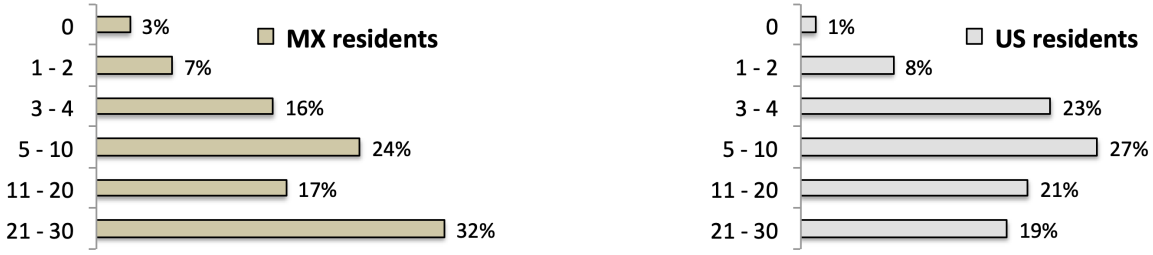
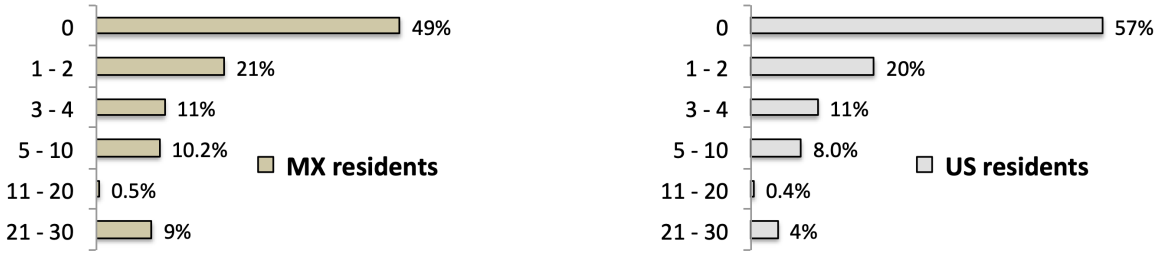


Figure 18. Frequency of pedestrian crossings in past month



Lastly, Table 19 provides some insight as to bridge users' degree of patience when it comes to waiting in line to cross. Note that there is almost no difference between U.S. and México residents' responses to wait times so this analysis reflects all respondents. In sum:

- Half of all vehicle, Ysleta SENTRI and pedestrian crossers think wait times into El Paso should not exceed 40, 15 and 15 minutes, respectively;
- Ninety percent of vehicle, Ysleta SENTRI and pedestrian crossers believe wait times should not exceed 60, 30 and 45 minutes, respectively.

Table 19. Acceptable wait times into El Paso by mode (in minutes)

percentile	vehicles	Ysleta SENTRI	pedestrians
10%	20	5	5
25%	30	10	10
50%	**40**	**15**	**15**
75%	60	20	30
90%	60	30	45
mean	**45**	**16**	**22**

NEXT STEPS

Every day tens of thousands of residents from El Paso and Cd. Juárez cross the bridge system to visit family and friends, shop and access services, work and conduct business, as well as for various forms of entertainment. This study documents these important social and economic activities and sheds light into the magnitude of retail and service expenditures made by crossborder purchasers. These crossborder consumer profiles (and subsequent ones) may consequently be useful towards targeted marketing strategies at various citywide levels, from business retention, recruitment and expansion opportunities to hospitality and tourism promotion to local businesses adapting their retail mix. As we move on from the COVID-19 pandemic and travel restrictions, this pilot study may also serve as benchmark on how crossborder activities and business change and recover.

For the next steps it is good to reiterate the limitations of the sampling design since they affect the spending patterns and estimates covered in this document. First, Stanton SENTRI bridge users are not surveyed. This is important because they likely have different socioeconomic characteristics, and even

though they are most likely to cross for work and education reasons, it is considered that their monetary resources are greater relative to other crossers. Hence, their total spending can be substantial especially given the fact that there are more SENTRI crossings at Stanton than through Ysleta (1,557,110 and 1,261,981 SENTRI vehicles crossed in 2019, respectively). Second, bridge crossers during the late night and early morning hours are not surveyed due to security concerns. Their spending profiles are somewhat of a black box since they include El Paso residents returning from having spent several hours in Cd. Juárez, and include Cd. Juárez residents whose plans may be for the following day or rest of the day. Third, crossings through Santa Teresa are also not covered since it is not part of the study area. Although they constitute a relatively small number of the regional crossings, their spending patterns are (anecdotally) tied to visitors from other parts of the State of Chihuahua whose destination is El Paso and, hence, their expenditures on average may be greater.

There is a working idea to address the limitation at Stanton in future iterations of the IBCS once the pandemic has subsided and it is safe to conduct surveys once again. IBD and COLEF are considering an online version of the survey in collaboration with Fideicomiso de Puentes Fronterizos de Chihuahua which handles toll operations in Cd. Juárez. A similar stratified random sampling approach would be applied where days are selected at random, but instead of random sampling of persons, SENTRI users for that day would be asked to confidentially participate via email. The response rate and distribution of respondents when they crossed would determine if the answers have a random component; if significant bias is present, online surveys would be reported separately from the face-to-face interviews.

The second aforementioned limitation is difficult if not impossible to overcome since it involves interviewer safety of conducting surveys late at night or during the early morning. Coverage at the Santa Teresa crossing faces somewhat of a similar problem as the fast flow traffic through the Stanton bridge with the exception that it has standard and ready lanes. In the future, it may be possible to implement a variant of the methodology at Santa Teresa but this would require additional resources from a third party. For instance, it may be possible to randomly select days where interviewers pass out flyers asking for persons to participate in an online version of the survey. This approach, however, has a greater likelihood of impersonating a convenience sample that is non-probabilistic in nature. That said, in the absence of no information, these data can also be very useful, just not generalizable.

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APPENDIX I

International Bridges Crossborder (Entry) Survey

1. Sex
2. Age
3. How many persons are crossing with you?

4a. Age of persons crossing with you?

4b. Sex of persons crossing with you?

5. If vehicle – Type of vehicle?
6. What country is your primary place of residence?
7. What city or town do you live in?
8. What is the primary reason why you are crossing today?
9. Is there a secondary reason why you are crossing today?
10. What area(s) of town do you plan on visiting?
11. What type of places do you plan on visiting?

12a. Do you plan on spending any money on this trip?

12b. If yes – What do you plan on spending on and how much on each establishment?

13a. How long will you be staying on this trip?

13b. If overnight – Where will you be staying?

14a. In the past 30 days, how many times have you crossed by vehicle?

14b. When you cross by vehicle, what is an acceptable wait time to cross into El Paso?

15a. In the past 30 days, how many times have you crossed by walking?

15b. When you cross by walking, what is an acceptable wait time to cross into El Paso?

International Bridges Crossborder (Exit) Survey

1. Sex

2. Age

3. How many persons are crossing with you?

4a. Age of persons crossing with you?

4b. Sex of persons crossing with you?

5. If vehicle – Type of vehicle?

6. What country is your primary place of residence?

7. What city or town do you live in?

8. What was the primary reason why you crossed today?

9. Was there a secondary reason why you crossed today?

10. What area(s) of town did you visit?

11. What type of places did you visit?

12a. Did you spend any money on this trip?

12b. If yes – What did you spend on and how much on each establishment?

13a. How long did you stay on this trip?

13b. If overnight – Where did you stay?

14a. In the past 30 days, how many times have you crossed by vehicle?

14b. When you cross by vehicle, what is an acceptable wait time to cross into El Paso?

15a. In the past 30 days, how many times have you crossed by walking?

15b. When you cross by walking, what is an acceptable wait time to cross into El Paso?